IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

DATAQUILL LIMITED,	§	
	§	
v.	§	
	§	Lead Case No. 2:13-cv-633-JRG-RSP
HUAWEI TECHNOLOGIES CO. LTD.	§	
ET AL.	§	
	§	
	§	

CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

On November 4, 2014, the Court held an oral hearing to determine the proper

construction of the disputed claim terms in U.S. Patent Nos. 6,058,304 ("'304 Patent");

7,139,591 ("'591 Patent"); 7,505,785 ("'785 Patent"); 7,920,898 ("'898 Patent"); and 8,290,538

("'538 Patent").   The claim construction disputes were raised between Plaintiff DataQuill

Limited and Defendants Huawei Technologies Co. Ltd., Huawei Device Co. Ltd., Huawei

Technologies USA, Inc., Huawei Device USA, Inc., Futurewei Technologies, Inc. and ZTE

(USA) Inc. After the claim construction briefing but before the claim construction oral hearing

the Huawei and Futurewei Defendants requested a stay as to those Defendants of all pending

deadlines pursuant to a settlement agreement. Dkt. 89 at 1. DataQuill and ZTE were the only

parties that participated in the oral hearing. After considering the arguments made by the parties

at the hearing and in the parties' claim construction briefing (Dkt. Nos. 78, 79 and 80), the Court

issues this Claim Construction Memorandum and Order.

BACKGROUND

The asserted patents result from a chain of continuation applications and share a substantially similar specification. The '304 Patent is the original parent patent and claims a foreign priority date of October 13, 1993.[1]   The '304 Patent, '591 Patent, and '785 Patent have issued reexamination certificates. Fifty-six claims in total are asserted. There are nine basic claim construction disputes. Terms in seven of those disputes have been addressed at least in part in claim construction orders from other courts.[2]

The patents-in-suit relate to a hand held data entry system. The Abstract provides in full:

> A data entry system includes a hand held data entry unit having a reading sensor for sensing commands and/or data, rewritable storage for storing information relating to selectable items, a controller (a microprocessor or other processing circuitry) and a display screen for displaying a user readable representation of the commands and/or stored information for a selected item, and a telecommunication interface for the telephonic transmission of information relating to a selected item or items from the storage to a remote processing center and for the telephonic information relating to selectable items from the remote processing center to the storage. Preferably a telecommunications interface is provided in the hand held unit for cellular or other wireless telephony systems. The hand held unit can be configured to combine the data entry functions with those of audio telephony.

In one embodiment the hand held unit is substantially pen-shaped as shown in Figures 1A and 1B and is intended for one handed operation. '304 Figures 1A, 1B, 6:28-35. The hand held unit may be utilized with a base unit that charges the unit and provides a connection to a standard telephone line. '304 Figure 2, 7:29-55. In an alternative embodiment, the hand held data entry

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[1] Unless otherwise noted, citations to the patent specification are made to the '304 Patent and are in the form of "'304 col xx:line yy."

[2] *DataQuill Ltd. v. Kyocera Wireless Corp.*, 01-cv-2302 (S.D. Cal. Oct. 25, 2005) (Dkt. 78 Ex. 1) (hereinafter "*Kyocera*"); *Research in Motion Ltd., et al. v. DataQuill BVI Ltd.*, 3:06-cv-0973 (N.D. Tex. Aug. 14, 2008) (Dkt. 78 Ex. 2) (hereinafter "*RIM*"); *DataQuill Ltd. v. High Tech Computer Corp.*, 08-cv-543 (S.D. Cal. Mar. 9 2011) (Dkt. 78 Ex. 3) (hereinafter "*HTC*"); *DataQuill Ltd. v. Handspring, Inc., et al.*, 01-cv-4653 (N.D. Ill. Feb. 28, 2003) (Dkt. 78 Ex. 4) (hereinafter "*Handspring*").

unit may be used without a base station. In such embodiments the hand held unit may contain a standard telephone plug or alternatively be intended for use with a cellular telephone network. '304 Figure 9 (standard telephone line), Figure 10 (cellular telephone), 13:22-35, 14:6-14.

APPLICABLE LAW

1. Claim Construction

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313. *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For

example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id*. The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "'[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). "[T]he prosecution history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during

prosecution in order to obtain claim allowance." *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448,452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are entirely unhelpful to a court. *Id*. Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*.

> The definiteness standard of 35 U.S.C. § 112 ¶2 requires that
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> a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty. The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable. The standard we adopt accords with opinions of this Court stating that "the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter."

Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129-30 (2014) (internal citations omitted). "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims. *Datamize, LLC v. Plumtree Software, Inc.,* 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus,* 134 S.Ct. 2120.

2. Means-Plus-Function Limitations

The asserted patents contain means-plus-function limitations that require construction. Where a claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112, ¶ 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'" *Id.* (citing 35 U.S.C. § 112, ¶ 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id.*

Construing a means-plus-function limitation involves multiple steps. "The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.*

For mean-plus-function limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*,

184 F.3d 1339, 1349 (Fed. Cir. 1999). The corresponding structure is not a general purpose computer but rather the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

3. Effect of Prior Claim Constructions

Prior claim construction proceedings involving the same asserted patents are "entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se*." *Maurice Mitchell Innovations, LP v. Intel Corp.*, No. 2:04-CV-450, 2006 WL 1751779, at *4 (E.D. Tex. June 21, 2006). The Court nonetheless conducts an independent evaluation during claim construction proceedings. *See, e.g., Texas Instruments, Inc. v. Linear Techs. Corp.*, 182 F. Supp. 2d 580, 589-90 (E.D. Tex. 2002); *Burns, Morris & Stewart Ltd. P'ship v. Masonite Int'l Corp.*, 401 F. Supp. 2d 692, 697 (E.D. Tex. 2005); *Negotiated Data Solutions, Inc. v. Apple, Inc.*, No. 2:11-CV-390, 2012 WL 6494240 (E.D. Tex. Dec. 13, 2012).

AGREED TERM

In their briefing the parties sought construction of three related terms: "said reading sensor, controller and display comprise a unitary assembly" ('304 claims 64, 97 and 98); "said display screen, sensor, antenna, one or more mechanical switches, speaker, power supply, and wireless communications interface are part of a unitary assembly" ('898 claim 66); and "said display screen, sensor, antenna, one or more mechanical switches, speaker, antenna, power supply and wireless communications interface are part of a unitary assembly" ('538 claim 3). Prior to the oral hearing the parties agreed to resolve the disputes as to these terms by agreeing

that the term "unitary assembly" means "an assembly of parts which has the nature of a unit or whole." Dkt. 87 at 1.

DISPUTED TERMS

1. **"hand holdable" and "hand held"** ('304 claims 32, 60, 64, 113, 114, 116 and 117; '591 claims 1, 32, 33, 35, 38, 42 and 44; '785 claims 43, 47, and 49; '898 claims 1, 18, 20, 22, 26, 27, 29 and 56; '538 claims 1, 2, 4, 5, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 23)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"can be held by one hand in normal use"	Indefinite. In the alternative, plain and ordinary meaning

The Parties' Positions

DataQuill asserts that its construction matches the *Kyocera* court's construction and the construction agreed to by the *RIM* litigation parties. Dkt. 78 at 5. DataQuill also asserts that the specification described prior art units that required two handed operation as being inconvenient. '304 1:23-26, 2:1-10. DataQuill asserts that the specification describes a unit that can be held in one hand. '304 3:66-4:4, 6:28-35, Figures 1A and 1B. DataQuill asserts that in the '304 Patent reexamination DataQuill explicitly argued for its construction. Dkt. 78 Ex. 11 at 134 ("The language 'hand holdable' means 'can be held by one hand in normal use'"). DataQuill asserts that it further distinguished in the reexamination devices that were not hand holdable because the operator had to grip the device with one hand and write on it with another hand. Dkt. 78 at 5.

DataQuill asserts that the term is reasonably certain as the prior court was able to construe the term. DataQuill further asserts that one skilled in the art would know with reasonable certainty that a device which is normally capable of one handed operation (such as a mobile phone) would fall within the claim scope while devices not so capable (for example a laptop or tablet computer), it is not covered. Dkt. 78 at 6. DataQuill objects to "plain and

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ordinary meaning" because both the specification and reexamination distinguished the invention

by describing "hand holdable" with regard to use of only one hand. Dkt. 78 at 7.

Defendants assert that *Kyocera* was decided before the Supreme Court's *Nautilus* ruling.

Defendants assert that the specification and prosecution history provide arbitrary distinctions as

to what is hand holdable. In particular, Defendants argue that DataQuill's construction conflicts

with DataQuill's characterization of the prior art. First, Defendants note that the background

portion of the patent describes the PTC-620 prior art unit as suitable for one-handed operation

but nevertheless describes the PTC-620 as being bulky and cumbersome. '304 2:4-10.

Defendants assert that the extrinsic evidence clearly indicates that the PTC-620 was intended for

one handed operation. Dkt. 79 at 5. Defendants thus assert that "hand holdable" must mean

something more than merely being operable in one hand. Dkt. 79 at 6.

Defendants also assert that the specification provides no objective measure to determine

when a device is hand holdable. Defendants assert that the specification implies that a device

would have to be smaller than the PTC-620. However, Defendants assert that DataQuill has

accused products that approximate or exceed the PTC-620 size. Dkt. 79 at 6. Defendants assert

that the only description of size in the specification is with regard to the device of Figures 1A

and 1B which is described as "substantially pen-shaped." '304 6:28-35. Defendants assert that

the prosecution history adds further ambiguity as DataQuill dismissed a list of devices as

"clearly . . . not meet[ing] the limitation of 'hand holdable'" by listing the dimensions and

weights of the devices, including some dimensions similar to the accused devices. Dkt. 79 at 7

(quoting Ex. 2 at 134). Defendants assert that DataQuill never provided, however, any

clarification as to what devices are "hand holdable." Defendants assert that the entire record

leaves one skilled in the art as only knowing that "hand holdable" can mean shaped thicker than

a normal pen but must be smaller in some undefined way than the PTC-620 and the devices listed in reexamination. Dkt. 79 at 7.

> In reply, DataQuill asserts that Defendants are over-reading the passage at 2:4-10:
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> One model PTC-620 has the same basic format as the other terminals, but is described as being for simple applications and features a snap-on reversible head for one-handed operation with either the left or the right hand. However, this terminal is still relatively bulky and cumbersome and in use it is easy inadvertently to operate one or more keys in the array of keys.

'304 2:4-10. DataQuill asserts that this passage makes clear that the PTC-620 is hand holdable. DataQuill asserts that the passage merely criticizes the PTC-620 as being limited to simple applications and being bulky such that it is easy to inadvertently operate a key. Dkt. 80 at 1. DataQuill asserts that the accidental pressing of keys is a concern that the patent solved via the use of a reading sensor. '304 3:28-46. DataQuill asserts that the intrinsic record never suggests that the PTC-620 was not hand holdable. Dkt. 80 at 2.

Analysis

Defendants in effect seek an exact quantitative dimension to determine what is "hand holdable."   However, in the overall context of the specification the distinction between two handed devices from one handed devices is what is emphasized with regard to "hand holdable." '304 1:23-25, 2:4-8, 6:28-35. This also conforms to the reexamination statement. Dkt. 78 Ex. 11 at 134.   Though the PTC-620 was asserted in the specification to be relatively bulky and cumbersome, the passage at 2:1-10 explicitly makes clear that the device is for one handed operation and the specification never asserts that the PTC-620 is not hand holdable. '304 2:1-10. Moreover, the file history statement cited by Defendants does not make an unambiguous disavowal limiting the hand held concept. Statements will constitute disclaimer of scope only if they are "clear and unmistakable statements of disavowal." *See Cordis Corp. v. Medtronic Ave,*

Inc., 339 F.3d 1352, 1358 (Fed. Cir. 2003).   An "ambiguous disavowal" will not suffice. *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citation omitted).   Because the file history "represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful in claim construction proceedings." *Phillips*, 415 F.3d at 1317.

In context of the specification as a whole, the term "hand holdable" is described as being holdable in one hand as opposed to requiring two hands.   Thus, when viewed in the context of the intrinsic evidence one skilled in the art could ascertain the scope of the invention with the reasonable certainty required under *Nautilus*.   *See Nautilus*, 134 S.Ct. at 2129.   The Court therefore agrees with the *Kyocera* court's construction and the construction agreed to by the *RIM* litigation parties.

The Court construes "hand holdable" and "hand held" to mean "can be held by one hand in normal use."

2. "reading sensor," "sensor," and "a first sensor"

"reading sensor" ('304 claims 9, 40, 64, 97, 98, 113, 114, 116 and 117; '591 claim 1; '898 claim 18)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"a sensor capable of detecting and reporting commands or data"	"a sensor for reading"

"sensor" ('591 claim 35; '785 claim 43, 47, and 49; '898 claim 1, 26, 56, 65, 66, and 67; '538 claim 1, 2, 3, 4, 5, 13, and 23)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"a structure capable of detecting a stimulus and transmitting a resulting signal"	"a sensor for reading"

"a first sensor" ('785 claim 49; '898 claim 26)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"No construction necessary; plain and ordinary meaning applies; only need to construe "sensor"	"a first sensor for reading"

The Parties' Positions

At the oral hearing and in the briefing the parties all acknowledged that the fundamental dispute as to the sensor terms revolves around whether a sensor encompasses a touch screen. *See* Dkt. 79 at 9. In addition, the parties' dispute whether "reading sensor" and "sensor" have the same meaning.

DataQuill asserts that its constructions follow the constructions of the *RIM* and *HTC* courts. Dkt. 78 Ex. 2 at 6-7, Ex. 3 at 3, 5. DataQuill assert that Defendants seek to exclude touch screens but the previous courts have repeatedly rejected such an exclusion. Dkt. 78 Ex. 2 at 7-8 (*RIM*), Ex. 3 at 4-5 (*HTC*), Ex. 4 at 12-13 (*Handspring*).

DataQuill asserts that "sensor" has an understood plain and ordinary meaning that matches its construction and also asserts that its construction tracks the constructions issued in the *HTC* and *RIM* cases (with the omission of the exemplary "light, temperature, radiation level, or the like" language). Dkt. 78 Ex. 2 at 6 (*RIM*), Ex. 3 at 3 (*HTC*). DataQuill asserts that the surrounding claim language specifies what the "sensor" senses. DataQuill notes that claims such as '785 claim 47 state "a sensor to sense commands and/or data for producing input signals" and do not use "reading." DataQuill asserts there is no reason to add "reading" to such claims.

As to "reading sensor," DataQuill asserts that the specification states that a "reading sensor" is a sensor for "sensing commands and/or data and for producing input signals in response to the sensed commands and/or data." '304 2:15-17, claim 113 ("a reading sensor for

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sensing commands and/or data and for producing input signals in response to said sensed commands and/or data"), '591 claim 1 (same), '898 claim 18 (same). DataQuill asserts that "sensor" has its own independent and plain meaning and that Defendants have not pointed to any expressions of manifest exclusion or restriction requiring "reading sensor" and "sensor" to carry the same definition. Dkt. 80 at 3.

DataQuill asserts that although the specification describes a bar code reader in one reading sensor embodiment, the specification expressly states that a "touch sensitive screen" "can be used in place of . . . the entry of commands by scanning the bar codes on the command bar code card." '304 12:65-13:21. DataQuill notes that in *Handspring* the court stated that a "reading sensor" includes "touch sensitive screens." Dkt. 78 Ex. 4 at 12-13. DataQuill further cites to a number of claims: '304 dependent claims 9 and 40 "a touch sensitive screen forming a said reading sensor;"   '591 claim 60 "said sensor is comprised of said display interface comprising a touch sensitive screen for sensing input;" '785 claim 39 "wherein said sensor is a touch sensitive screen."

As to Figure 8 embodiment, DataQuill notes that the specification states that the touch screen need not just be "in addition" but rather can be used in place of or in addition to the reading sensor: "touch screen entry can be used in place of or in addition to the entry of commands by scanning bar codes on the command bar code card." '304 13:19-21. Moreover, DataQuill points to the specification as contradicting Defendants assertion that the touch screen is only relevant to command bar codes since the touch screen may be used "for the entry of commands and/or the selection of displayed items." '304 13:12-14. DataQuill also notes that "data sensed" at the touch screen can be communicated. '304 13:3.

Defendants assert that the prior court rulings are overly broad. Defendants assert that the scope of the patents relates to a pen shaped data entry unit used as a reading sensor to order merchandise off a bar code list. Defendants assert that DataQuill now seeks to cover cellular phones that do not employ anything like a reading sensor. Dkt. 79 at 8. Defendants further assert that the terms "reading sensor" and "sensor" are used interchangeably throughout the specification. '304 2:13-22, 3:47-54, 3:56-61.

Defendants assert that the specification describes a reading head that includes a reading sensor. '304 3:56-57. Defendants assert the reading sensor is for reading bar codes. '304 6:39-42. Defendants assert that the touch screen embodiment of Figure 8 does not support DataQuill and to the contrary highlights why a reading sensor should not include touch screens. Dkt. 79 at 9-10. Specifically, Defendants quote the statement that Figure 8 "is substantially the same as the pen 10 described with reference to FIGS 1 and 3, apart from the addition of a touch sensitive screen 90 for the display 20." '304 12:66-13:2. Defendants assert that a touch screen 90 is used in addition to the reading head 14 in Figure 8 and that the reading sensor is repeatedly described in the reading head. '304 Figure 8, 4:43-45, 4:52-56 (emphasis added). Defendants assert that therefore the touch screen 90 cannot be the reading sensor.

Defendants assert the disclosed touch screen is a component distinct from the reading sensor and used to facilitate entry of user commands. Defendants assert that the specification describes two types of bar codes: one set associated with merchandisable items and a second set used for controlling operation of the pen. Dkt. 79 at 10 (citing '304 6:39-42, 1:8-10, 9:60-65). Defendants assert that the touch screen of Figure 8 was used with reference to the command bar codes, not the reading sensor function: "touch screen entry can be used in place of or in addition to the entry of commands by scanning the bar codes on the command bar code card." '304

13:19-21. Defendants assert that just because a touch screen may be used to enter data does not transform the touch screen into the reading sensor. Defendants assert that this is consistent with the claims which recognize the distinction between sensing commands and sensing data.

Defendants also assert that the specification provides alternatives to the bar code reader: a camera or other scanning sensor. '304 5:36-41. Defendants assert that although the specification describes the use of a touch screen in addition to the reading sensor, the specification does not describe the touch screen as a potential type of reading sensor. Dkt. 79 at 11.

As to dependent claims 9 and 40, Defendants assert that these claims were not part of the original disclosure and were only added later, thus diminishing any weight given to those claims. Defendants also note that the doctrine of claim differentiation does not trump the specification. Dkt. 79 at 11.

Analysis

The Court finds DataQuill's arguments more persuasive. The specification makes clear that a touch screen may be a "sensor." The embodiment described with regard to Figure 8 and at 12:65-13:21 makes this clear. As described, a touch screen 90 may be provided. This touch screen 90 may be separate or integral with the display screen. '304 13:5-10. Further, the "touch sensitive areas" of the touch screen can be used for "the entry of commands and/or the selection of displayed items." '304 13:10-14. Thus, the touch screen is used "so that data sensed by the touch sensitive screen can be communicated to the processor." '304 13:3-4. More importantly, the touch screen may be "**used in place of** or in addition to the entry of commands by scanning the bar codes on the command bar code card." '304 13:19-21 (emphasis added). In the context of the specification it is thus clear that a touch screen is included within the scope of the sensor

which senses the commands and/or data. Dkt. 79 at 9. The language of various dependent claims also matches the specification with regard to the touch screen: "a touch sensitive screen forming a said reading sensor" ('304 dependent claims 9 and 40); "said sensor is comprised of said display interface comprising a touch sensitive screen for sensing input" ('591 claim 60) and "wherein said sensor is a touch sensitive screen device" ('785 claim 39). Though Defendants point out that dependent claims cannot "trump" the remainder of the specification, here the dependent claims conform to the specification. The Court's finding that a touch screen may be a sensor is also in accordance with the *Handspring* ruling. Dkt. 78 Ex. 4 at 11-13.

As to "sensor," Defendants have not pointed to any exclusion or restriction within the intrinsic record indicating that the term should not carry its plain and ordinary meaning. *See Arlington Industries, Inc. v. Bridgeport Fittings, Inc.,* 632 F.3d 1246, 1254 (Fed. Cir. 2011) ("Even where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.") (internal citations omitted). Defendants have also not pointed to any clear statement that the use of "sensor" must be limited to "reading sensor." For "sensor," the prior courts have relied primarily on an extrinsic evidence dictionary definition of sensor including a listing of typical stimuli ("a structure capable of detecting a stimulus such as light, temperature, radiation level or the like and that transmits a resulting signal"). *RIM* at 6; *HTC* at 3. This Court finds that having rejected Defendants' arguments, no further construction is needed as the plain and ordinary meaning will be clear to the jury. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). At the

oral hearing DataQuill agreed to the Court's proposed construction of "plain and ordinary meaning."[3]

As to "reading sensor" the specification states a "reading sensor" is a sensor for "sensing commands and/or data and for producing input signals in response to the sensed commands and/or data." '304 2:15-17. At the oral hearing, ZTE asserted that a touch screen does not "read" data and that "reading" requires a visual representation of the data to be captured. However, as noted above, the specification explicitly references the use of a touch screen "in place of" the reading head such as in Figure 8. Moreover, in its ordinary meaning "reading" is not as limited as ZTE asserts. For example reading may be used with relation to the reading of braille or, more in context of the specification, the reading of input data by a computer or touch screen. In context of the specification statement cited above, the "reading sensor" is the sensor for sensing and reporting commands and/or data.

The Court construes "[a first] sensor" to have its plain and ordinary meaning. The Court construes "reading sensor" to mean "a sensor capable of detecting and reporting commands or data."

3. **"telecommunications line interface"** ('304 claims 114 and 117; '591 claim 1)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"an interface that enables direct telephonic communication via a telephone network"	"a device that enables telephonic communication between two or more devices by wire or cable"

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[3] At the oral hearing the Court proposed each of the constructions adopted herein and DataQuill asserted that it did not object to any of the Court's constructions.

The Parties' Positions

The parties' dispute is focused upon whether the "line" term is limited to a "wire or cable" such that "line" excludes wireless interfaces.

DataQuill objects to "wire or cable" that was added by the *Kyocera* court. DataQuill asserts that the prior court over-emphasized a dictionary definition of the word "line." DataQuill asserts that the prior court's construction excludes embodiments in the specification and contradicts dependent claims that recite "wireless" and "cellular" communications. DataQuill cites to Figure 12 which discloses a cellular telephone system that includes a "line interface" connected to the aerial antenna 178. '304 Figure 12, 16:31-35. DataQuill also cites to Figure 10 which discloses a telephone network interface in the hand held unit. '304 Figure 10, 14:15-17.

DataQuill also cites to the embodiment of Figure 2 in which a base unit includes a telecommunication interface. '304 Figure 2, 7:51-56. DataQuill also cites to '304 Patent independent claim 114 which recites the telecommunication interface is a telecommunication line interface and dependent claim 34 (which depends from claim 114) which states that the "telecommunication interface is a wireless telecommunication network interface" and similarly dependent claim 35 which states "said telecommunication network interface is a cellular network interface." DataQuill asserts that in the claims the term is always used in a manner that may be either wired or wireless: "wherein said telecommunication interface is a telecommunication line interface integral to said hand holdable unit and directly connects said hand-holdable unit to said telecommunications network." '304 claims 114, 117; '591 claim 1. As to the meaning of "integral," DataQuill asserts that the patent uses the term in the context of being part of the unit: "a hand held unit having an integral sensor, control, storage . . . and self-contained manner."

'304 2:30-33. DataQuill thus asserts that this limitation addresses the line interface being located as part of the hand holdable unit.

Defendants assert that their construction conforms to the ordinary meaning at the time of the invention. Defendants assert that the term "line" conveys a wire or cable, particularly in 1993. Dkt. 79 at 12. Defendants assert that some claims recite "telecommunications network" (e.g. '304 claims 64, 97, 98, 116) whereas other claims specifically add "line." Defendants assert that DataQuill's construction would render the addition of "line" superfluous. Defendants assert that the specification refers to "line" when referring to a "telephone line" ('304 7:51-57, 9:46-49) or "line interface" ('304 9:45-46, 16:4-17, 16:33-35) and that this refers to a "standard telephone handset" ('304 9:37-40). Dkt. 79 at 12. At the oral hearing ZTE also emphasized that '304 claim 114 states "wherein said telecommunications interface is a telecommunications line interface integral to said hand holdable unit." ZTE asserts that thus a "telecommunications interface" and a "telecommunications line interface" are not merely the same thing and have a different meaning. ZTE asserted that the different meaning was found in "line" which refers to a wire or cable.

As to the various embodiments, Defendants assert that a claim does not have to cover all embodiments. Rather Defendants assert that the language of the claim can refer to a particular embodiment. As to the surrounding claim language, Defendants assert that "integral" need not mean within the hand held unit but could include the definition of integral which means "important" or "essential." Defendants assert that the claim language in the claims at issue is "integral to" which conforms to its definition of integral whereas other claims use the word integral in the manner "integral with" ('304 claim 98). Defendants also point to the surrounding

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claim language of "directly connects." Defendants assert that a "wired" connection conforms to a direct connection, as opposed to a wireless connection.

Analysis

Defendants have not presented evidence establishing that at the time of the invention the ordinary meaning of "telecommunications line interface" is limited to only wire or cable lines. Dkt. 79 at 12-13. In contrast, the specification clearly includes wireless communications within the meaning of a "telecommunications line interface." In particular, Figures 10 and 12 relate to an embodiment that includes a connection to a wireless network. '304 Figures 10 and 12, 6:18-27, 14:6-14, 16:31-42. Figure 12 is described as "a block diagram illustrating the inter-relationship of functional elements of FIGS. 10 and 11." '304 16:26-27. Figure 10 provides a "telephone network interface" block 116 connected to element 178. '304 Figure 10. Figure 12 illustrates that for a "cellular telephone system" the "telecommunications interface 116 comprises a line interface/duplexer which is connected to an aerial 178." '304 Figure 12, 16:33-35. Figure 12 shows block 116 labeled "line interface/duplexer" connected to aerial 178. Thus, the specification clearly indicates that a "line interface" can be a wireless cellular interface. Elsewhere the "line interface" 116 is shown connected to a "telephone line 50" in a non-cellular embodiment. '304 Figure 4, 9:20-49. The uses in the specification of "line interface" clearly contemplate cellular and non-cellular phone lines and thus the term is not properly limited to wire or cable lines only.

As to Defendants' argument that "telecommunication interface" and "telecommunication line interface" are merely the same thing, it is noted that the line interfaces are generally referenced within the specification to the use of telephone network communications. In its

ordinary meaning the broader "telecommunication interface" does not necessarily carry this same requirement. As to Defendants' integral argument, the claims in question recite the line interface is "integral to said hand holdable unit." In the context of the specification this refers to being part of the hand held unit.

It is noted that Defendants' construction matches the construction of the *Kyocera* court. When asked at the oral hearing, DataQuill and ZTE could not provide any additional evidence as to the issues raised before the *Kyocera* court or the reasoning behind the *Kyocera* court's ruling. Rather, the evidence before this Court merely presents a claim chart with the prior court's construction. Dkt. 78 Ex. 1 at 10. Considering the full context of the specification, the Court departs from the *Kyocera* construction.

The Court construes "telecommunications line interface" to mean "a device that enables telephonic communication via a telephone network."

4. Carrier Terms

"carrier" ('304 claims 20, 55, 116 and 117; '591 claim 1)

"a carrier or a display for a plurality of data and/or command codes" ('304 claim 20)

"a carrier for a plurality of data and/or command codes" ('304 claims 116 and 117; '591 claim 1)

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DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
carrier: "a medium that carries one or more data and/or command codes" No further construction necessary.	carrier: "a medium for reading by the reading sensor" a carrier or a display for a plurality of data and/or command codes: "a medium for reading by the reading sensor that that has a two or more of data and/or command codes or a display that has two or more of data and/or command codes" a carrier for a plurality of data and/or command codes: "a medium for reading by the reading sensor that has two or more of data and/or command codes" No construction necessary for "command code"

The Parties' Positions

The parties' disputes focus on the inclusion of "reading" in Defendants' construction and the implication that the reading sensor and the carrier are separate items.

DataQuill asserts that Defendants add the word "reading" twice to create an argument that touch screens do not "read."   DataQuill asserts that Defendants' use of "a medium for reading by the reading sensor" is loaded with the unnecessary "reading" limitations to bolster an assertion that touch screens do not "read." DataQuill asserts that this is improper for the same reasons as argued above with reference to "reading sensor."

DataQuill asserts its construction was adopted the *RIM* and *HTC* courts. Dkt. 78 Ex. 2 at 17, Ex. 3 at 8. DataQuill asserts that the *Kyocera* court adopted a similar construction: "a medium which carries one or more data and/or command code, character, image or graphical or alphanumeric data representation." Dkt. 78 Ex. 1 at 17. DataQuill asserts that the *RIM* court did

not include the additional listing of items as the *RIM* court found "each already falls within the scope of either "data" or "commands." Dkt. 78 Ex. 2 at 17, n. 13.

DataQuill asserts that the parties agree the carrier is a "medium" and asserts that the specification describes "carrier" as something that carries various types of data, command codes or both. '304 at 5:22-26. DataQuill asserts that Defendants do not define "carrier" but merely import one example of a carrier into the construction. DataQuill asserts that the specification describes different potential carriers including a card ('304 5:18-22, 17:36-47), a display ('304 10:10-22, claim 55), and a sheet of material ('304 5:52-56). DataQuill asserts that the data on the carrier is used in conjunction with the sensor to control the device, select items or place orders. Dkt. 78 at 14. DataQuill asserts that in the bar code reader embodiment, the carrier could be a card such as shown in Figure 6. '304 Figure 6, 6:7-8. In such an embodiment DataQuill asserts a user scans the bar code to select an item. DataQuill asserts that in the touch screen embodiment the data and command codes are "carried" on the display. '304 13:10-21. In such an embodiment, DataQuill asserts that the user taps an area of the screen associated with an item. DataQuill asserts that Defendants' citations to examples in the specification in which the carrier is read by the reading sensor fail to justify adding that restriction because the specification is not so limited. Dkt. 80 at 6. DataQuill also cites to '304 dependent claim 55 which specifies "said carrier comprises a display" and DataQuill notes that this claim may depend from claims 113 or 114 that include "reading sensor."

Defendants assert that the specification describes a reading sensor that reads the carrier, allowing the carrier to, for example, act as a keyword extension of the pen. Defendants assert that DataQuill seeks to broaden the term to encompass the display of a data entry system. Defendants assert that the display and the carrier are two distinct components. Defendants point

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to "the invention also provides a data entry system additionally comprising means for displaying a plurality of selectable items" ('304 4:33-38) and "the invention also provides a carrier for a plurality of data and/or command codes . . . for association with means for displaying" ('304 5:18-22). Defendants also assert that it is clear that the "invention" provides a separate carrier and display. Defendants assert that the specification underscores the distinction between the components and that the carrier is what is scanned by the pen. '304 5:33-34, 12:51-57, 17:34-35.

Defendants also assert that the specification makes clear that the reading head "reads" the data of the carrier, for example where the pen reads the bar codes. '304 13:36-48. Defendants assert that DataQuill improperly relies on Figure 8 to assert that the carrier may be a display. First Defendants note that DataQuill thus reads the same screen as being the "reading sensor" or "sensor" and being the "carrier." Defendants further argue that in Figure 8 a reading head 14 is distinct from the touch screen 90 and the display 20. '304 Figure 8, 12:65-13:2. Defendants assert that the Figure 8 embodiment merely allows the user to enter commands on a touch screen in addition to reading data or commands from a carrier using a reading head. Defendants assert that this embodiment does not equate the carrier to the touch screen. Dkt. 79 at 16.

Defendants assert that the specification does disclose that a user may make selections from a catalog displayed on a television screen ('304 4:62-5:4). However Defendants assert that such a use is merely using the television screen as a medium for reading by the reading sensor. Dkt. 79 at 16. As to claim 55, Defendants assert that the display of claim 55 is distinct from the display screen in the independent claim from which claim 55 depends. Defendants also note that '304 claims 20 and 21 recite that the system further comprises "a carrier or display for a plurality of data and/or command codes." Defendants assert that the use of different terms creates an

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inference that the terms have different meaning and that the carrier does not include the display.

Dkt. 79 at 16.

In reply, DataQuill asserts that Defendants' arguments that the carrier and display cannot be the same components fail because the specification expressly teaches that one structure can satisfy both elements. DataQuill asserts that the embodiment of Figure 8 shows a touch screen and that "separate from a conventional display, any applicable touch sensitive screen technology can be used, either through the use of an addition to an existing conventional display screen, or use of a display screen with integral touch sensitivity." '304 13:6-10. DataQuill asserts that the passage then describes how the touch screen can carry command codes and data for user selection via the touch screen. '304 13:5-21. DataQuill asserts that the specification thus teaches that a single touch screen display can serve as the display, the sensor and the carrier. Dkt. 80 at 6. DataQuill asserts that Defendants' argument that the display screen and display of claim 55 are distinct avoids the real point: that claim 55 shows that the carrier and display may take the same form.

Analysis

To the extent Defendants assert that the specification cannot encompass touch screens and that "reading" excludes touch screens, those arguments are rejected for reasons similar to that described above with regard to the "reading sensor" term. Further, Defendants have not provided support from the specification limiting the carrier to "reading" as the term "reading" is construed by Defendants. The specification, in contrast, teaches a broad meaning for the term carrier: "the carrier carries a plurality of codes, each for a respective one of a plurality of natural language and/or numeric characters, and a plurality of commands for controlling the operation of

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the data entry or merchandising system." '304 5:22-26. Further, the specification teaches a variety of carriers including a card ('304 17:36-47), a display ('304 13:2-21), and a sheet of material ('304 5:52-56). Importantly, the passage at 13:2-21 makes clear that the touch screen display can be utilized to display commands and/or data that may be used for selection of such commands and/or data in place of scanning a bar code card.

At the oral hearing, ZTE argued that the listing of separate elements in the claims for sensors, displays and carriers creates a presumption that each element is a separate structure, citing *Becton Dickinson and Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010). As noted by DataQuill (citing *Retractable Techs., Inc. v. Becton*, 653 F.3d 1296, 1303-04 (Fed. Cir. 2011)), separate claim limitations do not however necessarily mandate separate parts. More importantly in the context of the present specification, separate parts are not required. In fact as described above with reference to the sensor term, the specification explicitly contemplates that a single touch screen unit may perform the functionality of the sensor, the carrier and the display. '304 13:2-21. In light of the specification description of the various components being combined into a touch screen unit, Defendants' arguments are rejected.

The Court construes "carrier" to mean "a medium that carries one or more data and/or command codes." In the terms "a carrier [or a display] for a plurality of data and/or command codes" no further construction is necessary other than for "carrier."

5. **"coded data"** ('591 claim 32 '898 claim 66) and **"encoded data"** ('898 claim 26)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
"information corresponding to data that can be interpreted by processing circuitry"	"data in the form of a code"

The Parties' Positions

DataQuill asserts that in the context of the specification the terms in dispute refer to data that is sensed by the sensor when used to select particular items and that this data is processed by the processor or controller to select the associated item for further user interaction. Dkt. 78 at 15. DataQuill asserts that the scope of the terms is broad and covers all types of information that can be sensed. DataQuill cites the specification examples of the sensor being a bar code reading sensor with the data being in the form of a bar code ('304 3:51-54, claim 42); the reading sensor being a camera with the data being anything that be interpreted using image recognition technology including "graphical or alphanumeric data representations" ('304 5:40); "fingerprints" ('304 5:43); and "signatures or written text" ('304 claim 81). DataQuill also cites the passage "codes other than bar codes or dot codes could be used . . . in other embodiments of the invention full character recognition (OCR) could be employed where the reading sensor is in the form of a camera." '304 17:48-54. DataQuill asserts that for a touch screen, the coded data can be the location on the screen. '304 13:2-21; '898 claim 66 ("wherein said coded data is: a location of multiple locations selectable from said display screen").

DataQuill acknowledges that the *Kyocera* court construed the term as "data having a recognizable pattern or structure." DataQuill asserts that its construction is more straightforward and helpful for the jury. Dkt. 78 at 16. DataQuill objects that Defendants' construction gives no meaning to "coding" and leaves the jury with the task of interpreting "coding." DataQuill asserts that Defendants will likely argue that the term "code" is limited to bar codes and that such an approach would exclude the examples listed above such as alphanumeric, written text, fingerprints, etc. DataQuill asserts that Defendants' construction would exclude such specification embodiments because in common parlance a jury might not understand

alphanumeric text (*e.g.*, "baseball") to be a code for an item clearly described by the text and likewise might not consider a "graphical" representation of a house, such as a house image, to be a "code" for a house.

Defendants assert that the specification states that the codes could be bar codes, dot codes or "other forms of codes." '304 3:54-55. Thus, Defendants assert what is being read is data in the form of codes. Defendants assert "code" is understandable to the jury (noting zip codes and Morse code). Defendants assert that this simple concept does not need confusing technical jargon such as DataQuill's "interpreted by processing circuitry." Defendants assert that DataQuill's construction would cover anything that could be interpreted by a generic processor and would not be limited to the *Kyocera* court's construction. Dkt. 79 at 17.

Defendants assert that DataQuill acknowledges that codes are limited to information that can be sensed by the sensors described in the specification. Dkt. 79 at 17. Defendants assert that such sensors are bar code/dot code readers, cameras or scanning tools. Defendants note that the specification calls these codes "representations" of the information. '304 5:35-40. Defendants assert that a representation of the information is in common parlance a code. Defendants assert that its construction conforms to every embodiment, is in plain English and would be understood by a jury. Dkt. 79 at 18.

Analysis

The specification makes clear that codes are not limited to bar codes and gives meaning to the term "code" in a broad manner as being information representative of data: "an alternative to the use of bar codes, other data representations could be used." '304 5:35-36; *See* '304 3:59-65, 5:18-29, 13:44-48. Thus, the codes may include "graphical or alphanumeric data

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representations" ('304 5:40), "fingerprints" ('304 5:43), "graphical representations and/or alphanumeric characters" ('304 at 13:46) and full character recognition (OCR) ('304 17:42-54).

Both parties' proposed constructions miss the meaning provided in the specification described above. DataQuill has not provided specification support for its construction. Further, DataQuill's construction could be interpreted to be so broad that it would just cover any data in a computer system. Defendants' construction on the other hand is ripe for jury confusion by merely reusing the word "code" and Defendants' construction could be interpreted to exclude the examples in the specification such as graphics, alphanumeric, written text, etc. As noted above and acknowledged by Defendants, the specification teaches that the codes are representations of data.

The Court construes "coded data" and "encoded data" to mean "information representative of data."

6. **"merchandisable items"/"item of merchandise,"** ('304 claims 23 and 64; '591 claims 1, 32, 38, 42 and 44; '785 claim 43; '898 claims 1, 20, 26, 59 and 65; '538 claims 1, 2, 5 and 23); **"merchandising system,"** ('304 claims 20, 23, 116, 117; '898 claims 56, 65, 66, 67, 70; '538 claims 3 and 5); and **"shopping selection"** ('591claims 1, 32; '898 claims 20, 26 and 66; '785 claims 43 and 49)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
No construction necessary; plain and ordinary meaning applies.	Merchandisable items: "physical items for purchase by a user" Items of merchandise: "physical items for purchase by a user" Merchandising system: "system for the sale of physical goods to a user" The use of the term in the claim preamble is limiting.

The Parties' Positions

The fundamental dispute presented is whether merchandise is limited to physical items.

DataQuill objects that "physical" does not appear in the '304, '591 and '538 patent and only appears in the '785 and '898 patents once in dependent claims with regard to the concept of physical contact with a power outlet. DataQuill asserts that the terms should have their ordinary meaning because the patents have no lexicography or disavowal of the full claim term scope. Dkt. 78 at 17-18. DataQuill asserts that the patents merely describe items that can be ordered from a catalog or "some other form of list."   '304 17:59-65. DataQuill asserts that the patents merely describe a processing center that can manage orders ('304 4:57-61), viewing pricing and availability of merchandisable items ('304 10:49-54) and devices people can use to obtain merchandisable items ('304 4:67-5:4).   DataQuill asserts that the passages Defendants cite merely refer to ordering items from a catalog but there is no disclosure about the type of merchandise being limited to physical items or that the catalog itself has to be physical (as opposed to being digital). Dkt. 78 at 18.

Defendants assert that in 1993 a person of skill in the art would recognize that merchandisable items refer solely to physical items. Defendants assert that the patent refers to items in catalogs. Dkt 79 at 19. Defendants also note that a UK patent cited in the '304 Patent is referred to as an example ordering system and that such patent related to grocery and petrol ordering. Dkt. 79 at 19 (citing Ex. 7 at 3-4, 9). Defendants also note that the UK patent described the "sale of banking services in addition to the sale of the kind of merchandise normally found in supermarkets" and such a passage indicates that a person of skill in the art recognizes the clear distinction between merchandise and services. Defendants also cites to

extrinsic patent documents that describe purchasing items from a Sears catalog as further showing at the time catalog items were known to solely refer to physical items. Dkt. 79 at 20.

Defendants assert that there is no disclosure in the intrinsic record that would expand merchandisable items beyond the ordinary meaning at the time, which were physical items. Dkt. 79 at 20. Defendants refer to the specification description that indicates that data is transmitted over the telephone to order items and after orders are processed the processing center "dispatches" the items to users. '304 9:50-59. Defendants assert that the use of "dispatch" for the items verses "transmit" for data indicates that merchandise was physical items.

Defendants assert that "shopping selection" appears only once in the specification with reference to making shopping selections from a catalog. '304 4:62-5:9. Defendants assert that the specification then immediately refers to that system as a "merchandising system" thus indicating that "shopping selections" are for merchandise. '304 5:10-11.

Analysis

Defendants have not established that items of merchandise in an ordinary meaning at the time filing of the original patent application were limited to physical goods. Though Defendants cite to the UK Patent GB-B-2,202,664 (the "'664 Patent") which is referenced at '304 1:6-31, this prior art reference counters Defendants' arguments. In particular, the '664 Patent includes an example of items which may be sold in a catalog which include "banking services" which may be "in addition to the sale of the kind of merchandise normally found in supermarkets." '664 at 9. This reference is indicative that non-physical items may be additional types of merchandise sold in a catalog. Further, Defendants have not pointed to any express manifestations of disclaimer or disavowal in the intrinsic record. *See Arlington Industries, Inc.*,

632 F.3d at 1254.   Rather, the specification just broadly refers to "the selectable items are merchandisable items and the remote processing centre initiates processing of user orders of the selectable merchandisable items."   '304 4:57-61.   Having rejected Defendants' inclusion of "physical" the dispute raised by the parties is resolved.   The Court finds that no further construction is thus needed.   *See O2 Micro*, 521 F.3d at 1362.

The   Court   construes   "merchandisable   items,"   "item   of   merchandise," "merchandising system," and "shopping selection" to have their plain and ordinary meaning.

7. **"means for displaying a plurality of [said] selectable items"** ('304 claims 20 and 117; '591 claim 1)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
Function: displaying a plurality of [said] selectable items	Indefinite.
Structure: a display, display screen, and/or a touch sensitive screen, and equivalents thereof	Function: displaying a plurality of selectable items
	Structure: display 20 in the form of a 2 line by 16 character supertwist LCD display screen, display interface 80, and processor 74 running an undisclosed algorithm.

The Parties' Positions

The parties dispute whether the processor is properly included within the structure of the means-plus-function element. If the processor is included in the structure, Defendants assert that the term is indefinite for the failure to disclose an algorithm for performing the function.

DataQuill asks the Court to adopt the construction adopted in *HTC*. Dkt. 78 Ex. 3 at 12-13. DataQuill asserts that the specification discloses a display screen for displaying the

selectable items: "the inclusion of the display in the hand held unit enables the user to verify the data being captured" ('304 2:30-37) and "a display screen for displaying a user readable representation of the commands and/or stored information for the selected item" ('304 2:22-24). DataQuill also asserts that a "touch sensitive screen" is disclosed:

> Fig. 8 illustrates another example of a pen in accordance with the invention. This example is substantially the same as the pen 10 described with reference to FIGS. 1 and 3, apart from the addition of a touch sensitive screen 90 for the display 20. 12:65-13:2

> Although FIG. 8 shows a touch sensitive screen 90 (e.g., an overlay) separate from a conventional display screen, any applicable touch sensitive screen technology can be used, either though [sic] the use of an addition to an existing conventional display screen, or the use of a display screen with integral touch sensitivity. 13:5-10.

DataQuill also cites to the passage: "[a]ny suitable display technology can be used which enables the displayed information to be read." '304 6:63-71.

DataQuill asserts that Defendants' structure includes structure beyond what is necessary to perform the claimed function. DataQuill asserts that the "processor" causes items to be displayed but that it is not part of the structure "displaying" the selected items: "the processor causes an error message to be displayed on the display screen." '304 13:2-4. DataQuill also asserts that the specific display structure 20 included in Defendants' construction conflicts with the teachings that "a touch sensitive screen 90" can be substituted "for the display 20." DataQuill also asserts that limiting the term to the particular display 20 (and its size/type) conflicts with the statement that "any suitable display technology can be used." '304 6:63-71. DataQuill also objects to inclusion of "a display interface" as such an interface is used for display 20 ('304 8:51-54) but the touch sensitive screen 90 utilizes a "touch screen interface 88" ('304 13:2-4). DataQuill also asserts that neither of the interfaces actually performs the claimed "displaying" function.

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Defendants assert that one skilled in the art would recognize that that the claimed displaying is a computer based function that is performed by a computer even though the claim does not specifically recite a computer. Dkt. 79 at 23 (citing to *Aristocrat Techs.*, 521 F.3d at 1333 for holding that a computer may be the intended structure even when not explicitly recited). Defendants assert that DataQuill's position that the processor "causes items to be displayed" yet only the display performs the displaying is untenable because the display screen by itself cannot display anything. Dkt. 79 at 23.

Defendants further assert that the means term is a separate limitation from the claimed reading sensor (which DataQuill asserts is a touch screen) and the claimed display screen. Defendants assert that therefore the "means" must be something other than the touch screen or a display screen. Dkt. 79 at 23-24 (citing *Becton Dickinson,* 616 F.3d at 1254 for the proposition that separately listed claim elements create a clear implication of distinct components).

Defendants assert no algorithm is disclosed for the processor. Thus Defendants assert that the means-plus-function term is indefinite. Dkt. 79 at 22.

DataQuill cites to *Aristocrat* to assert that just because a processor may enable particular images to be displayed, that does not make such hardware part of the corresponding structure. DataQuill also asserts that unlike *Becton*, there is nothing "facially nonsensical" about construing the term as DataQuill suggests. Dkt. 80 at 8.

Analysis

The structure for a means-plus-function element is limited to the structure in the specification that is "clearly linked or associated with the [recited] function." *Medtronic*, 248 F.3d at 1311. Here the function is "displaying a plurality of selectable items." '304 2:22-24, 30-

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37.   The display screen may be a convention display screen or "any applicable touch sensitive screen" such as the "use of a display screen with integral touch sensitivity." '304 13:5-10. Defendants seek the inclusion of a processor, however, the processor does not perform the actual displaying but rather the processor receives signals from the sensor, interprets those signals and derives data therefrom that is to be displayed on the display. '304 9:14-20. It is the display screen that performs the "displaying" not the processor. *See Assyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1371 (Fed. Cir. 2001) ("The corresponding structure to a function set forth in a means-plus function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended . . . .")

Though Defendants assert that the claims recite a display elsewhere in the claims, such earlier recitation relates to the display of "commands and/or information" ('304 claims 1-3) or "commands and said stored information" ('304 claim 117). The means for displaying relates to "displaying a plurality of selectable items." The specification makes clear that the same display may both display commands and/or stored information and display the selectable items. '304 Abstract, 1:51-57, 2:22-24, 13:10-17, Figure 3. The Court finds that the "displaying" function is performed by the display not the processor. It is noted that this finding conforms to the construction of the *HTC* court. *HTC* at 12-13.

The Court construes "means for displaying a plurality of [said] selectable items" as a means-plus-function limitation in which the function is "displaying a plurality of [said] selectable items" and the structure is "a display, display screen, and/or a touch sensitive screen."

8.   **"said hand-holdable device further is operable to sense a sequence of said data corresponding to an individual natural language or alphabetic character as part of**

building up a code that includes at least a plurality of alphabetic characters" ('785 claim 47)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
Code: "information that can be interpreted by processing circuity" No construction necessary on the full term; plain and ordinary meaning applies; only need to construe "code."	Indefinite.

The Parties' Positions

The dispute between the parties reduces to the question of whether the term "building up a code" would be understood by one skilled in the art in light of the specification.

DataQuill asserts that the arguments regarding "coded data" are applicable. Dkt. 78 at 25. DataQuill asserts that the claimed context in '785 claim 47 includes a sensor and controller that the telephone can use to "sense data corresponding to an individual natural language or alphabetic character to be displayed" and that the telephone is "further operable to sense a sequence of said data corresponding to an individual natural language or alphabetic character as part of building up a code that includes at least a plurality of alphabetic characters, and wherein said display screen displays a said code." '785 claim 47.

DataQuill asserts that "building up code" is straightforward and disclosed and explained with reference to Figure 6. DataQuill asserts that the inventors recognized that items often have an associated identification code (such as SKU number or bar code number) that is used for identification. '304 1:60, 10:23-34, 10:54-57. DataQuill asserts that the identification codes may be made up of alphanumeric characters. '304 5:40-41. DataQuill asserts that "building up

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codes" describes the process of inputting an identification code into a phone, one character at a time. Dkt. 78 at 26.

DataQuill asserts that Figure 6 discloses bar codes for numbers 0 through 9. '304 9:60-65. DataQuill asserts that these ten numbers allows a user to create (or "build up") any numeric code by scanning one number at a time. DataQuill notes that a code can be built from any "natural language or numeric character." '304 5:27-28. DataQuill asserts that the process of scanning numbers one at time to input a larger identification number is "building up code." DataQuill cites to the specification passage that indicates a code may be associated with each item through composite code and that a "composite code can be built up by capturing a desired sequence of individual codes." '304 5:31-32.

DataQuill asserts that Defendants offer no expert testimony or other evidence that the term would not be understood by one skilled in the art.

Defendants assert that "building up a code" is not a known expression in the art. Defendants assert that DataQuill's brief does not make clear what the term means and references concepts relating to inputting and creating without any particular clarity. Defendants assert that the concept of "inputting an identification code" is not used in the specification and likewise "creating" a code is not in the specification. Dkt. 79 at 27. Defendants assert that thus one skilled in the art is not informed of the proper scope.

Analysis

The specification provides guidance at to the meaning of the term "building up a code:"

> The invention also provides a carrier for a plurality of data and/or command codes
> (e.g., bar and/or dot codes) for association with means for displaying a plurality of

selectable items in a data entry system or a merchandising system as defined above, wherein the carrier carries a plurality of codes, each for a respective one of a plurality of natural language and/or numeric characters, and a plurality of commands for controlling the operation of the data entry or merchandising system, each code being associated with a visual representation of the corresponding natural language or numeric character or command and/or of a graphical representation thereof. **This avoids the need for a complete coded data source to be associated with each selectable item in, for example, a catalogue, rather a composite code can be built up by capturing a desired sequence of individual codes.**

'304 5:18-32 (emphasis added). This passage clearly equates building up a larger code through the use of a sequence of individual codes. Further, the specification describes that individual codes can represent natural language characters or numeric characters. '304 5:22-24, Figure 6. In light of the clear context of the specification and the passage at '304 5:18-32, the term "building up a code" can be ascertained to a reasonably certainty under the *Nautilus* standard to reference the use of a sequence of individual codes.

The Court construes "building up a code" to mean "forming a code through the use of a sequence of individual codes."

9. **"antenna"** ('591 claims 32, 33, 35, 42, 44; '785 claims 43, 47, 49; '898 claims 1, 18, 20, 26, 29, 56, 64, 65, 66; '538 claims 1, 2, 3, 4, 5, 23)

DATAQUILL'S CONSTRUCTION	DEFENDANTS' CONSTRUCTION
No construction necessary; plain and ordinary meaning applies.	"external aerial"

The Parties' Positions

DataQuill asserts that the ordinary meaning of "antenna" is not "external aerial." DataQuill also asserts that the specification does not disavow the ordinary meaning. Further DataQuill asserts that the term is well understood by one skilled in the art and a lay jury. Dkt. 78

at 26-27. DataQuill asserts that Defendants merely capture an exemplary embodiment in which

an aerial 178 is described with regard to Figure 12. DataQuill asserts, however, that there is

nothing in the intrinsic record that limits the antenna to an external aerial. DataQuill further

notes that two of the cited references in the '304 Patent explicitly disclose internal antennas.

Dkt. 78 at 27 (citing U.S. Patent Nos. 5,541,398 and 5,465,401). DataQuill further asserts that

Figure 10 is disclosed as a "self-contained hand held data entry device" that is "for use with a

wireless telephone network such as a cellular network." 6:18-22. DataQuill also cites to '591

claim 3 which claims the antenna as part of the "self-contained assembly."

Defendants assert that at the time of the invention a person skilled in the art would

understand antennas would necessarily have to be external. Dkt. 79 at 28. Defendants assert that

the term "antenna" is not contained in the specification but only first added in 2004 in claim 3 of

the '591 Patent. As to the cited references pointed to by DataQuill (U.S. Patent Nos. 5,541,398

and 5,465,401, the "'398 Patent" and "'401 Patent" respectively), Defendants assert that those

references were not published at the time of the priority date of the patents-in-suit. Dkt. 79 at 28.

Defendants assert that the '398 Patent and its parent U.S. Patent No. 5,218,188 (the "'188

Patent") further taught that most conventional data terminals still use external antennas and that

there are disadvantages to internal antennas. Dkt 79 at 29. Defendants cite many of the prior art

references of record in the patents-in-suit which disclose external antennas. Dkt 79 at 30. As to

Figure 10, Defendants assert that the specification does not discuss the element 178 shown in the

figure and only discusses aerial 178 with regard to Figure 12 which DataQuill admitted was an

external antenna. Dkt. 79 at 29.

In reply, DataQuill asserts that the prior art discussed by Defendants includes the '188

Patent (the parent of the prior art '398 Patent). DataQuill asserts that the '188 Patent was

published before the patents-in-suit priority and was filed in 1989.   DataQuill asserts that

Defendants thus admit that internal antennas were known before the priority date and in fact date

back at least to 1989, the '188 patent filing date. Dkt. 80 at 10, n. 3. DataQuill asserts that there

is no law compelling a term to be limited only to its most common implementation. DataQuill

asserts it is clear that the term has a broad general meaning and Defendants are attempting to

limit the term to one embodiment from the specification.

<u>Analysis</u>

Defendants assert that internal antennas were not known as of the October 13, 1993

priority date of the '304 Patent. However, the evidence does not support such assertion. The

'398 Patent was a continuation of the '188 Patent. The '188 Patent issued June 8, 1993 based

upon an October 24, 1989 filing date. Dkt. 79 Ex. 12. The '188 Patent explicitly acknowledges

that internal antennas are known at the time: "only recently some hand held units have been

marketed with internally located antennae." Dkt. 79 Ex. 12 ('188 Patent at 2:42-44). Defendants

have not presented any expert testimony to the contrary. Defendants' attorney argument that

antennas of 1993 must be limited to only external antennas because such antennas were the only

known antennas in 1993 clearly fails.

Furthermore Defendants have not pointed to any disavowal within the intrinsic record

limiting antennas to only external antennas. In fact, to the extent the specification provides

guidance as to internal versus external, the specification can be read as implying an internal

antenna. Figure 10 is described as showing a block diagram of a "self-contained, hand held data

entry device." '304 6:19-20. Figure 10 also includes element 178. '304 Figure 10. Figure 12 is

referenced as showing the "inter-relationship of the functional elements of FIGS. 10 and 11."

'304 6:26-27. With reference to Figure 12, element 178 is described as aerial 178. Though the aerial is shown external to the ASIC 150 in Figure 12, the ASIC 150 is just one of the components (components which include element 178) within the self-contained device of Figure 10. Thus, the specification at least creates an implication that aerial 178 may be within the self-contained device. At a minimum, this specification disclosure does not create a clear and unmistakable disavowal limiting the claim scope to only external antennas. *See Arlington Industries, Inc.,* 632 F.3d 1254 (requiring a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction). Having rejected Defendants' position, no further construction of the term is required.

The Court construes "antenna" to have its plain and ordinary meaning.

CONCLUSION

The Court adopts the above constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 27th day of January, 2015.

ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE